

Serial No. 10/656,246  
August 2, 2005  
Reply to the Office Action dated May 9, 2005  
Page 8 of 10

### REMARKS/ARGUMENTS

Claims 1-14 and 16-30 are pending in this application. By this amendment, Applicants amend claim 1.

Applicants appreciate the Examiner's indication that claims 17-30 are allowed, and that claims 2-7 and 10-14 would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims.

Applicants note that claims 22-26 depend upon claim 1, which has been rejected over prior art. Thus, it appears that the Examiner inadvertently included claims 22-26 in the listing of allowed claims.

Claims 1, 8, 9 and 16 were rejected under 35 U.S.C. § 102(e) as being anticipated by Kaitila et al. (U.S. 6,788,170). It appears that the Examiner inadvertently included claim 16 in the rejection over Kaitila et al. because claim 16 was amended in the Amendment filed on March 17, 2005 so as to be dependent upon allowed claim 17. Applicants respectfully traverse the rejection of claims 1, 8 and 9.

Claim 1 has been amended to recite:

**"A piezoelectric resonator comprising:**  
a substrate having one of an opening and a concavity;  
a vibrating section in which at least one pair of an upper electrode and a lower electrode oppose each other so as to sandwich an upper surface and a lower surface of a thin-film section having at least one layer of a piezoelectric thin film, the vibrating section being disposed over the one of the opening and the concavity; and  
a heat dissipating film located over at least one of the upper electrode and the thin-film section so as not to cover the vibrating section;  
wherein  
the heat dissipating film is arranged so as to project outwardly in a major surface direction thereof beyond peripheral edges of the one of the opening and the concavity." (emphasis added)

With the unique combination and arrangement of features recited in Applicants' claim 1, including the feature of "the heat dissipating film is arranged so as to project outwardly in a major surface direction thereof beyond peripheral edges of the one of the

Serial No. 10/656,246

August 2, 2005

Reply to the Office Action dated May 9, 2005

Page 9 of 10

opening and the concavity," Applicants have been able to prevent degradation of the heat dissipation by the heat dissipating film (see, for example, the third and fourth full paragraphs on page 12 of the originally filed specification).

The Examiner alleged that Kaitila et al. teaches all of the features recited in Applicants' claim 1.

Claim 1 has been amended to recite the feature of "the heat dissipating film is arranged so as to project outwardly in a major surface direction thereof beyond peripheral edges of the one of the opening and the concavity." Support for this amendment can be found in the fourth full paragraph on page 12 of the originally filed specification.

In contrast to Applicants' claim 1, Fig. 8a of Kaitila et al. teaches a frame-like layer 801, which the Examiner alleged corresponds to the heat dissipating layer recited in Applicants' claim 1, and a cavity 210, wherein the frame-like layer 801 clearly does not extend in a major surface direction thereof beyond peripheral edges of the cavity 210. As clearly seen in Fig. 8a of Kaitila et al., the frame-like layer 801 extends in a major surface direction thereof only to locations that are located within the peripheral edges of the cavity 210. Thus, Kaitila et al. certainly fails to teach or suggest the feature of "the heat dissipating film is arranged so as to project outwardly in a major surface direction thereof beyond peripheral edges of the one of the opening and the concavity" as recited in Applicants' claim 1.

Accordingly, Applicants respectfully submit that Kaitila et al. fails to teach or suggest the unique combination and arrangement of elements recited in Applicants' claim 1.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(e) as being anticipated by Kaitila et al.

In view of the foregoing amendments and remarks, Applicants respectfully submit that Claim 1 is allowable. Claims 2-14 and 22-26 depend upon claim 1, and are therefore allowable for at least the reasons that claim 1 is allowable. In addition, claim

Serial No. 10/656,246  
August 2, 2005  
Reply to the Office Action dated May 9, 2005  
Page 10 of 10

17 is allowed as indicated by the Examiner. Claims 16, 18-21 and 27-30 depend upon allowed claim 17, and are therefore allowable for at least the reasons that claim 17 is allowable.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: August 2, 2005

  
Attorneys for Applicant

Joseph R. Keating  
Registration No. 37,368

Christopher A. Bennett  
Registration No. 46,710

**KEATING & BENNETT LLP**  
10400 Eaton Place, Suite 312  
Fairfax, VA 22030  
Telephone: (703) 385-5200  
Facsimile: (703) 385-5080